




## **Vehicle Recyclers**

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# **A Guide for Implementing the Industrial Stormwater General National Pollutant Discharge Elimination System (NPDES) Permit Requirements**



**January 2006  
Publication #94-146**

 *Printed on Recycled Paper*



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**FINAL DRAFT**



**January 2006**



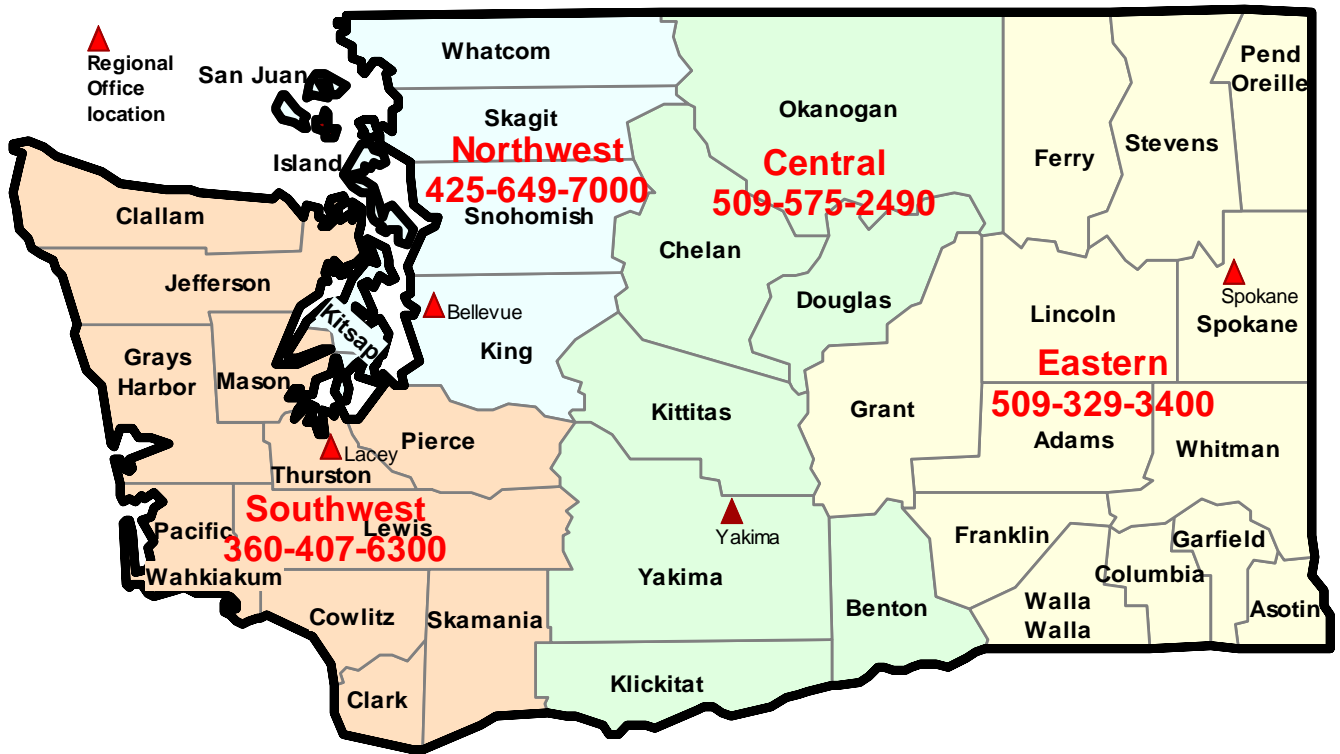
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# Acknowledgments

This document was prepared with considerable assistance from a technical advisory committee. Ecology wishes to thank the committee for its time and effort. The document could not have been prepared without the hands-on experience of industry representatives. Ecology also wishes to thank Stan Ciuba, original Ecology lead on this guidance.

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# Who needs a stormwater permit?

All **vehicle dismantling and recycler facilities in Washington State** are required to obtain a National Pollutant Discharge Elimination System (NPDES) General Industrial Stormwater Permit from the Department of Ecology **unless** they:

- 1) discharge stormwater to a combined sewer service and the local sewer authority has approved their discharges; or
- 2) apply for a “no exposure” certificate which Ecology accepts.

If you are unsure if you need a permit, contact your Washington State Department of Ecology regional office. A map showing the regions and their phone numbers is available on the inside front cover of this document.

# What is the stormwater permit process?

You can obtain a permit from your Washington State Department of Ecology regional office. A map showing the regions is available on the inside front cover of this document.

The following numbered list represents the steps in the permit process.

## 1. Apply for Coverage or Modification of Coverage

- **New facilities** that have not started operation must submit a permit coverage application and a Stormwater Pollution Prevention Plan (SWPPP) to Ecology at least 38 days before startup or submit a “no exposure” certificate to Ecology. You may submit either a hard copy or electronic version of the “no exposure” certificate.\* Hard copies are available from your regional Ecology office. You must submit a new “no exposure” form every 5 years or within 30 days of reissuance of a new permit.

\*Electronic submission is accessed by going to the following site:

<http://apps.ecy.wa.gov/stormwaterexempt/>

- **Existing facilities currently not holding a permit** must submit a permit coverage application to Ecology within 30 days of being informed that one is required or submit a “no exposure” certificate to Ecology. You may submit either a hard copy or electronic version of the “no exposure” certificate\*. Hard copies are available from your regional Ecology office. You must submit a new “no exposure” form every 5 years or within 30 days of reissuance of a new permit.

\*Electronic submission is accessed by going to the following site:

<http://apps.ecy.wa.gov/stormwaterexempt/>

- **Existing facilities that currently have a permit** must submit Ecology's declaration form. This form identifies the stormwater receiving water body and mixing zone. The mixing zone is the location of the receiving water body where stormwater is discharged. All permits must be renewed before March 24, 2007.
- **Existing facilities that currently have a permit, but would like to modify the permit** must submit an application for modification and an updated SWPPP to Ecology at least 38 days before the change. If you are changing the location where stormwater is being discharged, it is necessary to apply for a modification to your permit.

**Note: Download the NPDES Industrial Stormwater Permit at:**

**<http://www.ecy.wa.gov/programs/wq/stormwater/industrial/index.html#Download>**  
or call Ecology at (360) 407-6858 to ask for a copy.

## **2. Prepare and Use a Written Stormwater Pollution Prevention Plan**

A Stormwater Pollution Prevention Plan (SWPPP) is required for your National Pollutant Discharge Elimination System (NPDES) General Industrial Stormwater Permit. A SWPPP is a written plan to perform measures to identify, prevent, and control stormwater pollution.

### **SWPPP Contents**

- Facility description
- Site map
- List of materials handled
- List of pollutant sources and pollutant generating activities
- List of any leaks and spills of hazardous materials
- List of best management practices (BMPs) necessary to prevent, control, and treat stormwater pollution.

Appendix F (page 34) contains worksheets that can be used as part of your SWPPP.

The SWPPP should be kept on site and updated after inspections. If any changes need to be made to the SWPPP, make these changes within 30 days.

**Note: For help writing a SWPPP you can download *Guidance Manual for Preparing/Updating a Stormwater Pollution Prevention Plan for Industrial Facilities* at <http://www.ecy.wa.gov/biblio/0410030.html> or call Ecology at (360) 407-6858 and ask for publication #04-10-030.**

# How do you meet permit requirements?

## 1. Use Operational Best Management Practices

Best management practices (BMPs) are activities and procedures that can be followed to prevent and reduce stormwater pollution. Operational BMPs are any managerial practices used to prevent pollutants from entering stormwater.

The following are a list of necessary operational BMPs and how to use them. Following these best management practices is the best way to keep your vehicle recycling yard in compliance with your permit.

### a. Create a Pollution Prevention Team

- Identify one or more individuals who is/are responsible for developing and implementing the SWPPP.
- Hold regular meetings to review the overall operation of the BMPs and the results of inspections.
- Establish responsibilities for inspections, operation, and maintenance of BMPs, availability in emergency situations, and recordkeeping.
- Train all team members in reporting procedures and the operation, maintenance and inspection of BMPs.

### b. Practice Good Housekeeping

- Promptly clean up fluid and fuel leaks and spills.
- Clean catchbasins (sumps) if the depth of the deposit is equal to or greater than 1/3 the depth from the bottom to the lowest pipe into or out of the catchbasin.
- Remove and properly dispose of debris and sludge from all treatment BMP systems such as oil/water separators or settling/detention basins at least once per year. Determine, by lab analysis, if sludge is a dangerous waste.
- Regularly remove accumulated oil from oil/water separators and all other oil containment and removal systems to ensure proper operational efficiency of these systems is maintained. Properly dispose of waste oil.
- Promptly repair or replace all substantially cracked or otherwise damaged paved process areas (such as the dismantling area) and other impervious containment areas that can be contaminated by pollutant fluid leaks or spills.

### c. Preventative Maintenance

- Prevent the discharge of pollutants to storm drains, ground water, and surface water.

- Transfer fluids from the vehicles and parts to storage tanks or containers that are located in a covered impervious contained area. Pump fluids from cars. Always use drip pans. Empty drip pans immediately after fluids are collected using appropriate funnels. Replace drain plugs in fluid containing parts to reduce the slow release of remaining fluid.
- Construct impervious maintenance areas using Portland cement concrete or equivalent. Chemically resistant asphalt can be used for battery storage. Do not pave over contaminated soil.
- Discard empty oil and fuel filters, oily rags, and other oily solid waste into appropriately closed and properly labeled containers. If oil filters are removed, drain the oil for 24 hours before disposal. Puncture hole in top of filters to help draining. Recycle your drained filters with your vehicles.
- Clean all oily parts inside a building or on a covered impervious contained area, such as a diked/bermed concrete pad. Check for visible sheen on the contained stormwater and consider use of floating sorbent pads or booms before discharge. Wash water should not go directly into a stormwater drain or septic system.
- Store fluids in steel or plastic drums that are rigid and durable, resistant to corrosion from the weather and fluid content, nonabsorbent, water tight, rodent-proof, and equipped with a close-fitting cover. Place drums in covered impervious containment areas. Use containers, piping, tubing, pumps, fittings, and valves that are adequate for the fluid and intended use. Waste haulers for used oil and dangerous materials often provide safe containers. (For more information, refer to “Safe Handling of Empty Containers” (Reference 11, pg. 24).
- Label all containers and tanks clearly to prevent mixing wastes. Mixed wastes are considered dangerous wastes. Batteries should be stored in a covered plastic bin or in a covered building.
- Use dumpsters, garbage cans, drums, or other suitable containers for disposal of solid wastes contaminated with fluids and other pollutants. These containers must be durable, corrosion resistant, nonabsorbent, nonleaking, and have either a solid cover or screen cover to prevent littering. If covered with a screen, the container must be stored under a cover to keep precipitation out of the container.
- Use only water or local and state government approved materials for dust control.
- Stencil warning signs such as “Dump No Waste” at stormwater catchbasins and drains.
- Use a licensed recycler to collect fluids. (See Appendix D, pg. 32 and Reference 9, pg. 24 for recommendations on proper waste disposal and/or recycling).
- Post stormwater pollution prevention signs at fluid removal and storage areas. You can obtain a poster from Ecology’s Hazardous Wastes and Toxics Reduction (HWTR) program or prepare your own as suggested below:

**HELP PREVENT STORMWATER POLLUTION  
BY FOLLOWING THESE INSTRUCTIONS:**

1. Do not dump any vehicle fluid or any other pollutant down any storm drain.
2. Prevent all outside spills and leaks of fluids, especially when transferring fluids.
3. Keep all paved areas clean of debris that could contaminate stormwater.
4. Use oil spill booms for containment and dry absorbents to clean up spills and leaks of pollutant fluids.
5. Notify management of any outside leak or spill of any fluid or any situation that can cause ground or stormwater contamination.
6. Notify your management if an ongoing or recurring visible oil sheen is observed in stormwater discharge(s) or receiving water.
7. Notify management if any stormwater pollution control system is not operating well.

**d. Spill Prevention**

- Identify areas of the facility where oil, toxic material, hazardous material, or other pollutant spills are likely to occur and their drainage points.
- Ensure that employees are aware of spill response procedures, including material handling and storage requirements. Provide access to appropriate spill cleanup equipment. (See References 14 and 15, pg. 24).
- Stop, contain, and clean up all spills immediately upon discovery. Do not flush absorbent materials or other spill cleanup materials into a storm drain or to surface water. Collect the contaminated absorbent material as a solid, place in appropriate disposal containers, and provide disposal according to state and local regulations.
- Notify Ecology and the local sewer authority immediately (within 1 hour) if a spill of reportable quantities has reached or may reach a sanitary or storm sewer, ground water, or surface water. A spill of reportable quantity is any amount of material that can cause sheen or any amount of material that can pose a threat to human health or the environment. Take reasonable steps to minimize any adverse impacts to waters of the state and to correct the problem. If you call in the spill report, follow up with written documentation covering the event within thirty (30) days unless Ecology waives or extends this requirement.

**Ecology regional 24-hour emergency spill response numbers are:**

<b>Bellevue (NWRO)</b>	<b>425-649-7000</b>
<b>Olympia (SWRO)</b>	<b>360-407-6300</b>
<b>Yakima (CRO)</b>	<b>509-575-2490</b>
<b>Spokane (ERO)</b>	<b>509-329-3400</b>

- Place and maintain emergency spill containment and cleanup kits at all areas where there is a potential for fluid spills. Provide appropriate types and amounts of cleanup materials in cleanup kits. Kits should be readily accessible to personnel.

Note: Ecology recommends that the spill kits include salvage drums or containers, polyethylene disposal bags, an emergency response guidebook, safety gloves/clothes/equipment, shovels, and oil containment booms and absorbent pads – all stored in an impervious container.

#### **e. Training**

The permit requires an annual employee training program on the SWPPP and its implementation.

- Train all employees who work in pollutant source areas to identify pollutant sources and understand pollutant control measures such as spill prevention and response, good housekeeping, and environmentally acceptable vehicle component and other material handling practices, particularly the handling of all fluids.
- Include in the SWPPP the content, method, and frequency of the training and a log of the training dates.
- Show the “You Auto Recycle” video available free from Ecology. (See Reference 10, pg. 24)

#### **f. Reporting**

- Retain records of all monitoring on site. Keep all permit and compliance records including Discharge Monitoring Reports (DMRs) for at least 5 years.

**Note: More information on DMRs can be found at:**

<http://www.ecy.wa.gov/programs/wq/stormwater/industrial/reporting.html>

- **Report sampling results to Ecology quarterly on a DMR**, either as a hard copy or electronically. Keep copies of DMRs with the SWPPP. Sampling reports must include instances when there was no discharge and instances when sampling was not conducted. Also include any available pollutant sampling data that is not required by the permit and an explanation for any missing quarterly data. Submit quarterly reports within 45 days following the end of a reporting period, no later than May 15, August 14, November 14, and February 14 to:

**Industrial Stormwater Permit Manager  
Department of Ecology  
Water Quality Program  
P.O. Box 47696  
Olympia, WA 98504-7696.**

- Record the following for each sample: the date of analysis, exact location where the sample was collected, method of collection, time of collection, name of individual conducting the sampling or analysis, analytical methods used on each sample, and analytical results. If sampling criteria were used that do not follow acceptable procedures, explain why alternative procedures were used. Laboratory

analytical reports on organics and metals must also include Chemical Abstract Service Number (CASN), method detection limit, and practical quantitation limits (PQL). **You must keep these records on site.** Check with the lab for proper reporting forms.

- Summarize the results of each inspection in an inspection report or checklist and attach it to the SWPPP. The person inspecting the site must sign the quarterly visual monitoring report. If someone else reviews and signs the report, that person must follow permit section G17. **The report must include a certification that, in the judgment of the person doing the inspection, the facility is in compliance or non-compliance with the permit requirements** and identify any incidents of non-compliance.

**The visual inspection report must include:**

- Scope of the inspection.
- The date of the inspection.
- Major observations relating to the implementation of the SWPPP such as performance of the BMPs.
- A summary of the actions which will be taken to meet permit requirements.
- A tracking procedure to ensure that an inspection report is prepared and appropriate action steps taken.

**Use worksheets in Appendix F (pg. 34) to record inspection results.**

- **Submit a detailed written report describing noncompliance event(s) within 30 days of discovery. It must contain:**
  - A description of the noncompliance, including discharges greater than significant amounts of pollutants, and significant spill events of oil or hazardous substances.
  - Exact dates and times.
  - A statement if the noncompliance has not been corrected.
  - The anticipated time it is expected to continue.
  - The steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance. (Permit Condition S5.E.)
- Immediately notify your Ecology regional office of any noncompliance.

## 2. Use Structural Best Management Practices

Structural BMPs are physical, structural, or mechanical devices or facilities designed to prevent pollution from entering stormwater.

The following is a list of typical areas that produce pollutants and associated best management practices. Following these best management practices is the best way to keep your vehicle recycling yard in compliance with your permit.

### a. Vehicle Holding Yard

**Definition:**

**The holding yard** is where a wrecked or used vehicle is temporarily stored on pervious (soil) or impervious paved surfaces (concrete, asphalt, etc.) prior to the dismantling.

**Vehicle Holding Yard BMPs:**

- Inspect all vehicles arriving at the holding area immediately upon arrival for leakage or potential leakage of fluids. Promptly fix and clean up any leaks from the vehicles. You may store vehicles that do not leak in the holding area without draining any of the fluids.
- Do not dismantle fluid-containing components in the holding area. Parts that do not contain fluids (such as fenders, hoods, and seats) may be removed in the holding area.
- Move vehicles with leakage to the process/dismantling area immediately. Remove the fluids from the leaking components. Use drip pans under leaking components as needed.
- Examine the holding area, at least monthly, for contamination of holding yard paved and soil surfaces. The inspection date, location, observations, and the inspector's signature need to be recorded by a member of the Pollution Prevention Team.

### b. The Processing Area – Vehicle Dismantling and Fluid Removal

**Definition:**

**The processing area** is where all dismantling work is done on vehicle components that contain fluids. Processing may involve: draining of fuel or other fluid from a single leaking component; removing part or all of the fluid containing components; and water or steam cleaning of parts, vehicles, and equipment. Parts that do not contain fluids (such as fenders, hoods, and seats) and sealed units (such as spicer axle assemblies, shock absorbers, and bumper shocks) may be removed outside the process area.



**Process Area BMPs:**

- Design the process area to retain all fluids that may be spilled or released so they do not disperse and pollute stormwater or ground water. Refer to cover and containment options below.
- Design the process area so that surface stormwater cannot drain into the process area. The process area needs to be sufficiently above the grade level of the non-process area to stop run-on of stormwater from the non-process area into the process area.
- Do not drain any sump located in the process area to surface waters or ground water unless the water collected in the sump is properly treated. Wastewater (wash water from vehicle, equipment, and parts washing or steam cleaning) discharges from the processing area must be:
  - Conveyed to sanitary sewer with sewer authority approval and proper pretreatment needed,
  - Permitted under another Ecology permit which would require proper treatment (for additional information contact the Ecology regional office in your area), or
  - Totally recycled, if practicable.
- Remove fluids with an effort to prevent spillage in the process area by using drip pans or other devices to collect fluids.
- Remove the fluid from fluid-containing components to the greatest extent possible prior to any partial or total dismantling of the component.
- Close engine hoods after parts and/or fluid removal if possible.

**Process Area Cover and Containment BMPs:**

You may choose one of the following containment approaches to help meet permit requirements:

**i. Enclosed Building**

An enclosed building with a contained impervious floor, such as Portland cement concrete, or other impervious surface that is chemically resistant to all vehicle fluids. There shall be no floor drainage to the outside other than connections to sanitary sewers authorized by the local sewer authority. There shall be no discharge to a storm drain or to a surface water unless authorized by an Ecology wastewater discharge permit.

**ii. Containment with a Roof**

An impervious contained pad, Portland cement concrete, or other impervious surface, under a roof.

**iii. No Discharge Option (only for eastern and central Washington)**

A “no stormwater discharge” option from uncovered contained process areas is acceptable only in those areas of eastern and central Washington with low rainfall.\* A “no stormwater discharge” option means that no stormwater is allowed to flow from the process area. Any stormwater in the area must be small enough in volume to be collected for separate treatment or disposal. Stormwater may be disposed of in a sanitary sewer if local authorities allow. Check with your local sewage plant for information on discharge limits and to obtain a discharge permit if required.

\*Low rainfalls areas have an annual average precipitation of 15 inches a year or less.

**Process Area Flooring BMPs:**

- Construct the impervious pad with Portland cement concrete; asphalt, which is chemically resistant to gasoline or other vehicle fluids that may leak or spill; or equivalent impervious containment. Do not use gravel as the material for the pad because it is not impervious to water and other fluids.
- The pad must have a perimeter dike, berm, dead-end sump, or other physical barrier or inward sloping to contain spills and leaks. The dike or berm should prevent stormwater from running onto the pad from other areas and running off the pad into adjacent areas. Construct the dike, berm, or inward slope to allow mobile equipment access to the process area.

**c. Fluid Storage Area**

**Definition:**

The **fluid storage area** is the area(s) where solvents, fuel, oil, coolants, liquid chemicals, and other fluids from vehicles are stored prior to use, resale, recycle, treatment, or disposal.

**Fluid Storage Area Cover and Containment BMPs:**

You may choose one of the following containment approaches to help meet permit requirements:

**i. Enclosed Building**

An enclosed building with a contained impervious floor, such as Portland cement concrete, or other impervious surface that is chemically resistant to all vehicle fluids. There shall be no floor drainage to the outside other than connections to sanitary sewers authorized by the local sewer authority. There shall be no discharge to a storm drain or to a surface water unless authorized by an Ecology wastewater discharge permit.

**ii. Containment with a Roof**

An impervious contained pad, Portland cement concrete or other impervious surface, under a roof.

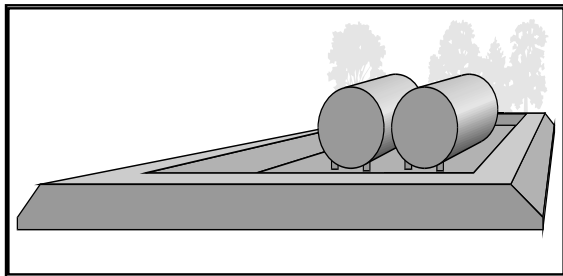
**iii. No Discharge Option (only for eastern and central Washington)**

A “no stormwater discharge” option is acceptable only in those areas of eastern and central Washington with low rainfall.\* A “no stormwater discharge” option means that no stormwater is allowed to flow from the area. Any stormwater in the area must be small enough in volume to be collected for separate treatment or disposal. Stormwater may be disposed of in a sanitary sewer if local authorities allow. Check with your local sewage plant for information on discharge limits and to obtain a discharge permit if required.

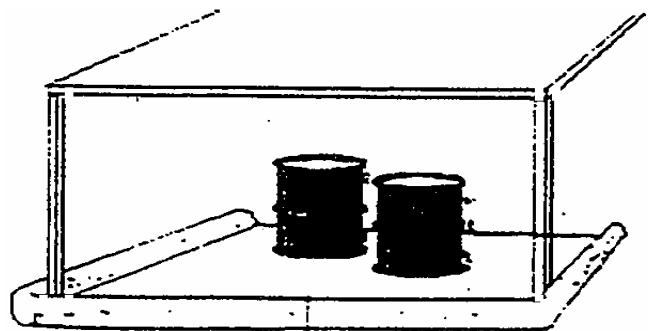
\*Low rainfalls areas have an annual average precipitation of 15 inches a year or less.

**BMPs for Tank Storage (typically used for waste oils) and Container Storage (typically 30 or 55 gallon drums):**

- **Label each container/tank with its contents. For on site reusable fluids, label as follows: “Useable Antifreeze,” “Useable Gasoline,” etc.**
- Use impervious secondary containment of tanks (Figures 1 and 2) or double-walled tanks. Double-walled tanks do not need additional containment but should be Underwriters Laboratory (UL) approved.
- The secondary containment area must be:
  - Paved, or equivalent.
  - Free from cracks and gaps.
  - Impervious to contain leaks and spills.
  - Enclosed with walls or dikes sufficient to contain 10 percent of the total volume of all the containers/tanks or 110 percent of the largest container/tank stored in the containment area, whichever is greater.

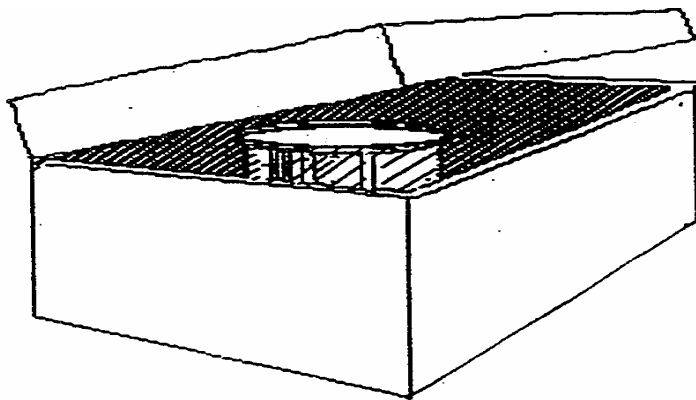


*Figure 1. Above Ground Tank Storage (typically used for used oil)*



*Figure 2. Covered and Bermed Containment Area*

- Include overflow protection to prevent spills during filling of the tanks.
- In low rainfall areas, uncovered secondary containment areas for tanks may slope to a drain to discharge uncontaminated stormwater only. The drain must have a valve to stop any fluids from being released. The drain valve should be kept closed unless emptying uncontaminated stormwater.
- The stormwater drain outlet may have a dead-end sump for the collection of small spills. If a dead-end sump is used, it must include a locked drainage valve or plug. Keep the valve or plug in the closed position to prevent releasing fluids. Clean the sump weekly, or as needed, to prevent the accumulation of fluids.
- Direct any contaminated stormwater released from the drain to: 1) A sanitary sewer if allowed by the local sewer authority, or 2) an oil/water separator or other appropriate treatment device.
- Examine entire fluid storage areas monthly for fluid spills or leaks. Clean up any accumulated fluids promptly and repair leak and spill sources. Record inspection date, location, observation, correction measures, and signature by a member of the Pollution Prevention Team.
- Locate portable devices on level and stable surfaces. An example is a commercially available plastic tray that holds four 55 gallon drums, with a cover to keep out the rain (See Figure 3).
- Handle and store dangerous wastes, including glycol-based anti-freeze solutions, spent lead acid batteries, and battery acids in accordance with Ecology's hazardous waste handling requirements (see Reference 8, pg. 24).



***Figure 3. Container Completely Encloses Storage Tank. This applies only to fluid storage in low rainfall areas. It is applicable for battery storage everywhere.***

- Do not mix incompatible materials such as oils, antifreeze, windshield washer fluids, and brake fluids with solvents (Appendix C, pg. 30).
- Store reactive, ignitable, or flammable liquids in compliance with applicable uniform fire code requirements and hazardous waste regulations (Chapter 173-303 WAC).
- Recycle, treat, or dispose of all fluids in accordance with applicable state and local government requirements (Appendix C, pg. 30 and Reference 9, pg. 24).

Note: If windblown rain at lean-to and covered storage facilities with open sides for containers causes or can cause the discharge of contaminated stormwater (significant amount of pollutants), use proper containment and treatment.

#### **d. Vehicle Storage Yards**

##### **Definition:**

The **vehicle storage yard** is generally an outdoor area on a pervious surface such as soil or rock, used to store vehicles in various stages of dismantling.

##### **Storage Yard BMPs:**

- Remove all fluids and batteries in the vehicle process area prior to transfer to the yard with the exception of sealed units such as spicer axle assemblies, shock absorbers, and bumper shocks.
- Do not remove fluids or dismantle or remove vehicle components in the vehicle storage yard. This may result in a release of hazardous liquids to the environment.
- Remove windshield washer fluid. Recycle or reuse the washer fluid.
- Promptly clean up any fluid leaks found in the storage yard.
- Use drip pans to temporarily contain drips/leaks of fluids from the stored vehicles or use plastic sheets to cover oily parts until the vehicle is transferred back to the process area.
- If the stormwater runoff from the vehicle storage yard contains a significant amount of oil, use additional operational and source control BMPs and/or direct the contaminated stormwater to an oil/water separator or equivalent oil removal system until the benchmark value for oil is no longer exceeded (see References 3 & 4, pg. 24).
- Employees must continually watch for spills or releases while attending to their normal work activities. Employees must immediately report any spill or releases of materials which may contaminate stormwater to the appropriate person or persons identified in the SWPPP (preferably a lead person). This person(s) must order a prompt cleanup of the spilled or released materials.
- Devise a system for identifying which vehicles have been drained of fluids and which have not. This will help ensure that all vehicles have been drained before

entering the storage yard and ensure that only drained vehicles are going to the crusher.

## **e. Vehicle Crusher**

### **Definition:**

A **vehicle crusher** is a mechanical device which reduces the volume of vehicle hulks prior to transporting to a scrap metal yard. It can be either portable (mobile) or stationary. A crusher is a source of stormwater and/or soil contamination when fluid containing parts are crushed.

### **Stationary Vehicle Crusher Cover and Containment BMPs:**

You may choose one of the following cover and containment approaches to help meet permit requirements:

#### **i. Impervious Surface with Cover**

Crush the vehicles on an impervious concrete or asphalt pad that is resistant to the fluids. This area should have a dike or other physical barrier around the perimeter and a roof or cover. Otherwise it must be located inside a building.

#### **ii. Impervious Surface without Cover (only for eastern and central Washington)**

Containing the crusher in an area without cover is acceptable only in those areas of eastern and central Washington with low rainfall.\* Crush vehicles on an impervious concrete or asphalt pad that is resistant to the fluids. The containment area should have a dike or other physical barrier around the perimeter.

\*Low rainfall areas have an annual average precipitation of 15 inches a year or less.

### **Mobile Vehicle Crusher Cover and Containment BMPs:**

You may choose one of the following cover and containment options to help meet permit requirements:

#### **i. Containment with Cover**

Crush the vehicles on an impervious concrete or asphalt pad that is resistant to the fluids. This containment area must have a dike or other physical barrier around the perimeter and a roof or cover. Otherwise it must be located inside a building.

#### **ii. Containment without Cover**

Crush vehicles on an impervious concrete or asphalt pad that is resistant to the fluids. The containment area must have a dike or other physical barrier around the perimeter.

#### **iii. On Pervious Surfaces (only for eastern and central Washington)**

Crushing on pervious surfaces is acceptable only in those areas of eastern and central Washington with low rainfall.\*

\*Low rainfall areas have an annual average precipitation of 15 inches a year or less.

**Vehicle Crusher BMPs:**

- Crush only vehicles which have had fluids removed from all components except the sealed units such as spicer axle assemblies, shock absorbers, and bumper shocks.
- Only remove fluids in the process area.
- Angle crushers to allow fluids to flow out of crusher. All fluids should be collected in a labeled container that has secondary containment. If crushing on a pervious surface, place a tarp under the collection container.
- Check fluid collection container regularly to ensure fluids do not reach top of container.
- Empty fluid collection container when it is 75 percent full and crusher is not in operation. You must handle fluids released during crushing as hazardous waste.
- The use of self-contained crushers designed to collect leaks within the crusher unit is recommended.
- Clean up all fluid leaks and spills promptly.
- After each crushing operation clean area around crusher. Dispose of all wastes appropriately.

**Ecology highly recommends removal of all mercury switches from the vehicles prior to crushing. Most vehicle shredders require that all mercury switches are removed from the vehicles.**

**f. Waste/Scrap Piles of Vehicle Components****Definition:**

Scrap engines, transmissions, and other scrap parts stored outside can cause pollution of surface water and contamination of soil.

**Waste/Scrap Pile BMPs:**

- Remove fluids from all scrap components prior to transfer to outside storage except for sealed units such as spicer axle assemblies, shock absorbers, and bumper shocks.
- Store all batteries separately in a nonleaking covered container or under a roof area with containment.

**Waste/Scrap Pile Cover and Containment BMPs:**

You may choose one of the following cover and containment options to help meet permit requirements:

**i. Containment Pad Under Cover (preferred)**

Store the scrap components on an impervious concrete or chemically resistant asphalt containment pad under a roof or waterproof tarp. To prevent stormwater run-on and runoff, install a dike, berm or other **physical** barrier

around the perimeter, and/or an inward sloping of the pad with appropriate outside grading to a sump.

**ii. Uncovered Containment Pad (minimally acceptable)**

Ensure that all fluids have been drained from parts. Store parts on an uncovered impervious concrete or chemically resistant asphalt pad with inward sloping (with appropriate outside grading to prevent run-on), a dike, or other physical barrier for containment.

Direct the stormwater runoff from the pad to an oil/water separator or other appropriate treatment system if the stormwater drainage from the containment contains a significant amount of oil or any other pollutant.

**iii. No Discharge to Surface Water (only for eastern and central Washington)**

A “no stormwater discharge” option is acceptable in those areas of eastern and central Washington with low rainfall.\* A “no stormwater discharge” option means that no stormwater is allowed to flow from the area. Any stormwater in the area must be small enough in volume to be collected for separate treatment or disposal. Stormwater may be disposed of in a sanitary sewer if local authorities allow. Check with your local sewage plant for information on discharge limits and to obtain a discharge permit if required.

\*Low rainfall areas have an annual average precipitation of 15 inches a year or less.

**g. Storage of Parts for Sale**

**Definition:**

The parts storage area is where parts removed from vehicles are stored for resale.

**Storage of Parts for Sale BMPs:**

You may choose one of the following BMPs to help meet permit requirements:

**i. Storage in Building (preferred)**

Store parts in a building with no floor drainage to the outside other than approved connections to sanitary sewers.

**ii. Storage under Cover (preferred)**

Store parts on an impervious concrete or chemically resistant asphalt pad with inward sloping or dike or other physical barrier under a roof. If you use inward sloping, the grading outside and adjacent to the pad must be sufficient to prevent the run-on of stormwater.

**iii. Storage on Uncovered Impervious Containment**

Store parts on an uncovered impervious concrete or chemically resistant asphalt pad with inward sloping (with appropriate outside grading to prevent run-on), or dike, or other physical barrier for containment.



#### iv. **Storage on Uncovered Ground Areas**

- Remove fluids from all parts before being stored, except sealed units such as spicer axle assemblies, shock absorbers, and bumper shocks.
- Replace all plugs/caps/seals intended to retain fluids before storing the parts.
- Use drip pans, as needed, to contain remaining drips of fluids. Use appropriate cover, such as a roof or tarp, for storage of all oily parts that are not steam cleaned.

If the stormwater discharge from an uncovered parts storage area contains greater than a benchmark value of oil and grease, or any other pollutant, then appropriate corrective action steps must be taken (details on benchmark values can be found on pg. 19 of this document). Action steps may include use of an oil/water separator or other appropriate system for treatment prior to discharge to surface water.

#### v. **For Storage in Low Rainfall Areas\***

In those areas of eastern and central Washington with low rainfall,\* a “no stormwater discharge” option is acceptable. A “no stormwater discharge” option means that no stormwater is allowed to flow from the area. Any stormwater in the area must be small enough in volume to be collected for separate treatment or disposal. Stormwater may be disposed of in a sanitary sewer if local authorities allow. Check with your local sewage plant for information on discharge limits and to obtain a discharge permit if required.

\* Low rainfalls can be defined as those areas that have an annual average precipitation of 15 inches a year or less.

### h. **Contaminated Soil**

#### **Definition:**

All areas of a vehicle recycler facility that have exposed soil may have contaminated soil. **Contaminated soil** is any soil that has come in contact with a pollutant. The severity of the contamination will depend on factors such as: the toxicity of the pollutant, waste fluid control method, total cumulative fluid volume lost, and spill cleanup procedures.

Contact Ecology’s regional office for spills of dangerous or hazardous waste such as gasoline, diesel, strong acids or bases, and mercury if:

- The material is released into the environment. (Small spills on impervious surfaces are not considered a release to the environment.)
- The spill is a threat to human health or the environment. (If it takes more than a shovel full of soil to clean up the spill, it is a threat.)

### **BMPs for contaminated soils:**

- **Control the source**
- **Contain the spilled material**
- **Clean up the soil**

Collect the contaminated soil in appropriate containers and **analyze it to determine proper disposal technique**. You may move it to an on-site covered impervious containment area for temporary storage or cleanup, or arrange to transport it to a waste treatment facility (see Appendix E, pg. 33).

- **Prevent Contact with Stormwater**

- Cover the contaminated soil with a durable plastic cover, or equivalent, to prevent contact with rainwater.
- Divert stormwater around the covered contaminated soil to prevent the contamination of stormwater.

- **Collect and Treat the Stormwater**

Contain, collect, and treat the stormwater runoff from the contaminated soil site with an oil/water separator or other appropriate treatment if it contains a significant amount of oil or other pollutant.

## **i. Erosion and Sediment Control (ESC)**

### **Definition:**

During heavy storms and high runoff conditions, soil that is loose from heavy site activity or poor soil stabilization can erode. The areas likely to be affected by soil erosion are drive lanes and sloped yard areas with exposed soil. **Erosion and sediment control** are those practices that can be used to prevent soil movement.

All facilities must evaluate the risk of soil erosion on their site. At a minimum, the SWPPP must include a narrative that describes significant amounts of soil erosion at the site. If you discover soil erosion or a potential for soil erosion **then use the following BMPs:**

- **Drive Lanes** - Construct the drive lanes through the storage yard with 3/4 inch crushed rock or equivalent stable surface.
- **Other Areas** - Install crushed rock, gravel, or other erosion control techniques such as vegetative covers. Install check dams, rip rap, gravel filter berms, stormwater conveyance channels, and settling basins, as needed (see References 3 and 4, pg. 24, for additional information on ESC BMPs).

## **j. Stormwater Collection and Conveyance System**

### **Definition:**

The **stormwater conveyance system** includes ditches, irrigation drains, stormwater sewers, and gutters that direct rainwater from your facility to another conveyance

system, water body, or collection system. It is an important component of your stormwater pollution prevention plan. The following are some applicable BMPs:

- Keep uncontaminated stormwater away from pollutant sources and treatment systems wherever possible. This can be achieved by grading the runoff areas appropriately and installing contained concrete pads, or equivalent, such that uncontaminated stormwater drains around them.
- Collect, segregate, and convey, as needed, significantly contaminated stormwater to appropriate treatment BMPs.
- Convey all contaminated stormwater in impervious channels, piping, etc. to prevent the contamination of soil and ground water during conveyance. Use of durable plastic liners may be appropriate in some cases.

### 3. Monitor and Sample Stormwater

You must monitor and sample stormwater in order to comply with permit requirements. Stormwater monitoring and sampling helps determine if additional BMPs are necessary.

A “significant amount of a pollutant” is a pollutant that has the potential to cause or contribute to a violation of surface water quality, ground water quality, or sediment management standards.

**Ecology uses benchmark values (see Table 1 below) to indicate significant amounts of pollutants.**

**Table 1 – Benchmark Values**

Parameter*	Benchmark Value	Action Levels
Turbidity, NTU	25	50
PH Units	Below 6 and above 9	Below 5 and above 10
Total Zinc, µg/L	117	372
Petroleum Hydrocarbons-Oil/grease, mg/L	15	30
Total Copper, µg/L	63.6	149
Total Lead, µg/L	81.6	159
Hardness	NA	

\* Additional parameters may be required by Ecology for 303 (d) and TMDL listed waters that are already contaminated.

If your sampling results are above benchmark values or action levels, Ecology requires different levels of response. The goal of these responses is to reduce the pollution of stormwater.

#### **Level One Response**

If sampling results show pH values outside the benchmark value range of 6-9, it is called a level one response, and the permittee must:

- Inspect the site as soon as possible for sources of high or low pH and other stormwater contamination.
- Decide if additional BMPs should be applied.\* This will be based on the source of the contaminant.

### **Level Two Response**

If sampling results show that two out of the four previous four quarterly sampling results are above action levels for any parameter, it is called a level two response, and the permittee must:

- Identify the potential sources of contamination.
- Decide which additional source control and operational BMPs to apply and apply them.\*
- Submit a report to Ecology that states actions taken to reduce contaminate levels. You must submit this report within 6 months of taking a level two response.

### **Level Three Response**

If sampling results show that four quarterly samples are above the action levels, it is called a level three response, and the permittee must:

- Identify the potential sources of contamination.
- Decide which additional source control, operational, and stormwater treatment BMPs to apply and apply them.\*
- Submit a report to Ecology that states actions taken to reduce contaminate levels. You must submit this report within 12 months of taking a level three response.

\*If you have applied all the operational and structural BMPs listed in sections 3 and 4 of this guidance and your samples still exceed benchmark or action values, your Ecology regional office can help you select additional BMPs.

**The following is a list of the stormwater monitoring requirements and how to conduct them:**

#### **a. Sampling**

The following list summarizes the major sampling elements: taking the sample, analyzing the sample, reporting, and what to do if the sample exceeds the benchmark values.

- All permitted facilities must conduct quarterly sampling and visual inspections of authorized stormwater discharges to surface water during typical facility operations. Facilities must report sampling results to Ecology quarterly on Discharge Monitoring Reports (DMRs). Facilities must report when there are no

discharges and a no sampling decision based on 8 consecutive quarters of a reported value that is equal to or less than the benchmark value (permit condition S4.B).

- Collect a single grab sample, a time-proportionate sample, or a flow-proportionate sample. You must take grab samples within the first hour after discharge begins. Take time-proportionate and flow-proportionate samples within the first 30 minutes after discharge begins and take samples over a two-hour period. Sample storm events that have at least 0.1 inches of rain over 24 hours and are preceded by at least 24 hours of no greater than trace precipitation.
- Take samples as close to the authorized point of discharge to surface water or the storm drain as is practicable. Select sampling points that have the greatest exposure to pollutants. Otherwise, you must sample and analyze each point of discharge that will significantly vary in the concentration and type of pollutant. Record drainage area and type of drainage surface (vegetated, paved, etc.) so that you can estimate volumes or flows of all discharges.
- Include an explanation for deviating from any sampling procedures specified in this guidance and in the permit. For exceptions to sampling requirements check the permit (special conditions S4.A and S4.B).

**Note: More information on stormwater sampling can be found at:**

**<http://www.ecy.wa.gov/programs/wq/stormwater/industrial/reporting.html>.**

## **b. Sample Analysis**

- Analyze, handle, and preserve samples in accordance with the permit. The testing laboratory must receive samples within 24 hours of sampling. Keep all samples at a temperature below 4° C (39°F). The testing lab usually provides the necessary containers, preservatives, cold packs, and shipping details to meet these requirements.
- The parameters required to be analyzed are: turbidity, pH, total zinc, total copper, total lead, petroleum (oil and grease), hardness, and any other parameter required by Ecology for total maximum daily load (TMDL) or 303 (d) listed waters.
- For oil and grease only, you must take grab samples. Do not transfer samples from one container to another. A wide-mouth solvent prerinsed, one-liter glass bottle with a Teflon insert in the lid should be used to collect a minimum of 750 mls. (See also Reference 6, pg. 24).
- Use only accredited laboratories (Chapter 173-50 WAC) for analyzing the following parameters: total zinc, total copper, total lead; petroleum hydrocarbons including oil and grease, and hardness. You can download the list of accredited labs at: [http://www.ecy.wa.gov/programs/eap/labs/labs\\_main.html](http://www.ecy.wa.gov/programs/eap/labs/labs_main.html). At the home page click “Frequently Asked Questions” and then “Accredited Labs List.”
- Sampling for hardness is not required: (1) for discharges to marine waters or (2) if metals are no longer tested because they were below benchmark values.

- If sampling is conducted for any of the above parameters, then the accredited lab must also analyze turbidity and pH.
- Ecology may require sampling for other parameters depending on site and receiving water conditions such as TMDL and 303 (d) lists.
- Complete and submit a DMR to Ecology with the results of sampling and visual monitoring inspections within 45 days after the end of each calendar quarter. If the sampling report shows the stormwater runoff exceeds one or more of the benchmark values or action levels, the owner/operator must: (1) inspect the facility within two weeks, (2) implement appropriate BMPs to reduce the discharge to below the benchmark value or action level,\* (3) report the actions taken, (4) retain a copy of the DMR for a minimum of 5 years, and (5) amend the SWPPP to include the new BMPs.

\*If you have applied all the operational and structural BMPs listed in this guidance and your samples still exceed benchmark or action values, your Ecology regional office can help you select additional BMPs.

### c. Visual Monitoring

**Conduct quarterly visual inspections** of the discharges to ground and surface water during sampling. Conduct an annual inspection of the remaining unsampled discharge points during a storm event.

- In the SWPPP:
  - List personnel that will conduct inspections.
  - Describe a procedure to ensure that you report inspections and take appropriate actions as a result of inspections.
  - List the personnel with signatory authority.
  - List who will be responsible for writing and signing the certificate of compliance.
- Visually inspect for the following:
  - The presence or absence of floating materials, suspended solids, oil and grease, visible sheen, stains, turbidity, and odor in the stormwater discharges.
  - Stained soil in vehicle storage, dismantling, and fluid removal areas.
  - Accurate descriptions of the pollutant sources and the site map in the SWPPP. Update the SWPPP as needed.
  - Implementation of adequate BMPs. If you need to change or add BMPs, update the SWPPP. Stormwater sampling will help to determine if additional BMPs are necessary by identifying pollutants that are above benchmark levels.
  - The presence of unpermitted non-stormwater discharges such as domestic wastewater and wastewater from vehicle parts and equipment cleaning. This is completed during dry season inspections.

#### **d. Dry Season Inspections**

**Conduct at least one dry season inspection during July, August, or September each year.** The dry season inspection must occur after at least 7 consecutive days of no precipitation. This inspection determines whether there is/are unpermitted non-stormwater discharges to storm drains or receiving waters such as vehicle parts and equipment wash water. Observe all discharge points during dry weather for odors, stains, abnormal flows, etc. As a rule, the discharge point should be dry during a period of extended dry weather. It can take up to three days after a rain event for a discharge point to dry. Infiltration of ground water into underground stormwater conveyance systems is common. If the inspector discovers a non-stormwater discharge, notify the appropriate Ecology regional office (map on back of title page for phone numbers) and eliminate the illicit discharge within 30 days, or apply for a discharge permit.

# References\*

1. *August 2002 Industrial Stormwater General Permit*, Department of Ecology, modified in 2004.
2. *Guidance Manual for Preparing/Updating the SWPPP for Industrial Facilities*, Department of Ecology, April 2004, Publication #: 04-10-030.
3. *Stormwater Management Manual for Western Washington*, Department of Ecology, February 2005, Publication # 05-10-029 through 05-10-033.
4. *Stormwater Management Manual for Eastern Washington*, Department of Ecology, September 2004, Publication # 04-10-076.
5. *Guidance for Evaluating Emerging Stormwater Treatment Technologies: Technology Assessment Protocol-Ecology*, Department of Ecology, Revised June 2004, Publication # 02-10-037.
6. *How To Do Stormwater Sampling : A Guide for Industrial Facilities*, Department of Ecology, Revised February 2005, Publication # 02-10-071.
7. Hazardous Waste Services Directory:  
<http://www.ecy.wa.gov/apps/hwtr/hwsd/default.htm>
8. *Hazardous Waste Generator Checklist*, Department of Ecology, Revised October 2004, Publication # 91-12b.
9. *You Auto Recycle, A Vehicle Recycler's Guide for Managing Hazardous Materials*, Ecology HWTR Program, September 2005, Publication #97-433.
10. *You Auto Recycle*, Ecology HWTR Program, February 2003, Publication # 97-433, Video Publication # 04-04-024.
11. *Safe Handling of Empty Containers*, Ecology HWTR Program, Revised October 2004, Publication # 96-431.
12. *Used Oil Facts*, Ecology HWTR Program, November 2005, Publication # 02-04-006.
13. *Spent Antifreeze*, Ecology HWTR Program, September 2003, Publication #03-04-017.
14. *Reporting Hazardous Material Spills under WA Dangerous Waste Regulations*, HWTR Program, Revised January 2004, Publication #92-119.
15. *Emergency Spill Response in WA State*, Ecology Spill Response Program, July 2002, Publication #97-1165-CP.
16. *A Vehicle Light Switch Removal Guide*, Ecology HWTR Program, November 2005, Publication #05-04-024.



17. *Stormwater Management for Auto Recyclers: Only Rain in the Drain*, Video Publication #05-04-025.

18. *Auto Mercury Switch Removal from Hoods, Trunks & ABS Sensor*, Video Publication #05-04-023.

\*Download at <http://www.ecy.wa.gov/pubs.shtm> or call your Ecology regional office for copies of references or help on web links.

# Appendix A – Acronyms

AKART – All known available and reasonable treatment

BMP – Best management practice

DMR – Discharge Monitoring Reports

HWTR – Hazardous Waste and Toxics Reduction Program

NPDES – National Pollutant Discharge Elimination System

SIC – Standard Industrial Classification Codes

SWPPP – Stormwater Pollution Prevention Plan

TMDL – Total maximum daily load

UIC – Underground Injection Control Program

## Appendix B – Glossary

**Action level:** A pollutant concentration above which Ecology requires a follow-up inspection and corrective action. Section S4.B of the 2004 modified permit gives action levels for various parameters. This section also provides the procedures to be followed if monitoring shows parameters with concentrations above the action levels.

**Adaptive management procedures** (defined in S4.C. of the modified permit): Actions the facility operator must take when any of the samples exceed benchmark values, including the preparation of a written report.

**AKART:** Acronym for “all known, available, and reasonable methods of prevention, control, and treatment.” AKART represents the most current methodology that can be reasonably required for preventing, controlling, or abating the pollutants and controlling the pollution associated with a discharge.

**Benchmark value:** A pollutant threshold concentration, above which a pollutant is considered likely to cause a water quality violation and below which is unlikely to cause a water quality violation. Benchmark values are not water quality criteria and site-specific conditions must still be considered to determine if an actual water quality violation exists.

**Best management practices (BMPs):** Schedules of activities, prohibitions of practices, maintenance procedures, management practices, and structural practices to prevent or reduce the stormwater pollution.

**Bypass:** The intentional diversion of waste streams from any portion of a treatment facility.

**Catchbasin insert (CBI):** Typically a CBI consists of a box, brackets, fabric bag, etc., containing a filter or absorbent medium that is placed into a catchbasin.

**Dangerous wastes:** Wastes designated in the Washington State Dangerous Waste Regulations, WAC 173-303-070 through 173-303-100.

**Dead-end sump:** Impervious pit for the collection of spilled or leaked fluids.

**Discharge Monitoring Report (DMR):** A report to record and send sampling results to Ecology. Use form in Appendix F. (Worksheet 11, pg. 48)

**Demonstrably equivalent:** The technical basis for the selection of all stormwater BMPs are documented within a SWPPP.

**Functionally equivalent:** The operational, source control, treatment, or innovative BMPs which result in equal or better quality of stormwater discharge to surface water or to ground water than BMPs selected from the SWMM for eastern or western Washington.

**Hardness:** Typically the calcium and magnesium content in water.

**Hazardous wastes:** Any liquid, solid, gas, or sludge (including any material, substance, product,

commodity or waste, regardless of quantity) that exhibits any of the physical, chemical, or biological properties described in WAC 173-303-090 or 173-303-100.

**Heavy metals:** Metals of high specific gravity (such as, lead, zinc, and copper) that pose long-term environmental hazards.

**Illicit discharge:** Any discharge that is not composed entirely of stormwater and is not covered under a separate NPDES permit and conditionally approved discharges listed in Special Condition S3.C.

**Leachate:** Liquid that has percolated through the soil and contains substances in solution or suspension.

**Lean-to:** A single pitch roof usually attached to the side of a building.

**Media filters:** Particulate or fabric materials either in fixed bed, cartridge, or catchbasin configuration that exhibit filtration or adsorption properties.

**Mixing zone:** That portion of a water body adjacent to an effluent outfall where mixing results in the dilution of the effluent with the receiving water. Water quality criteria may be exceeded in a mixing zone as conditioned and provided for in WAC 173-201A-100.

**National Pollutant Discharge Elimination System (NPDES):** The national program for issuing, modifying, revoking, terminating, monitoring, and enforcing water discharge permits, and imposing and enforcing pretreatment requirements, under sections 307, 402, 318, and 405 of the federal Clean Water Act, for the discharge of pollutants to surface waters of the state from point sources. These permits are referred to as NPDES permits and, in Washington State, are administered by the Washington Department of Ecology.

**Non-conforming land use:** An industrial facility located in an area that is not zoned for industrial land uses.

**Off-line facility:** Water treatment facility to which stormwater runoff is restricted to some maximum flow rate or volume.

**Oil:** Materials, including but not limited to, petroleum, fuel, oil and gasoline, sludge, oil refuse, and oil mixed with waste other than dredged spoil. (40 CFR Subpart 112.2(a))

**pH:** A numerical measure of the alkalinity (7 to 14) or acidity (less than 7) of a substance.

**Self-determination:** A determination by the facility operator that additional actions must be taken to reduce the contamination of stormwater, as a result of an inspection or sampling.

**Structural Source Control BMPs:** Physical, structural, or mechanical devices or facilities designed to prevent pollutants from entering stormwater.

**Stormwater management manuals for western and eastern Washington (SWMM):** The technical manuals prepared by Ecology for stormwater management. For BMPs implemented prior to February 2001, it is the *Stormwater Management for the Puget Sound Basin* published in

1992. For all facilities west of the crest of the Cascade Mountains as of February 1, 2002, it is the *Stormwater Management Manual for Western Washington*. The *Stormwater Management Manual for Eastern Washington* is the applicable SWMM for all facilities east of the crest of the Cascade Mountains as of November, 2004. It also applies to any future revision of the technical manuals as they become available.

**Stormwater Pollution Prevention Plan (SWPPP):** A documented plan that reflects the measures used to identify, prevent, and control the contamination of point source discharges of stormwater and ground water.

**Suspended solids:** Particulates in water or wastewater.

**303(d) listed waters:** Specific segments of water bodies listed by Washington State as required under section 303(d) of the Clean Water Act. The most current list of impaired waters is the applicable list.

**Total maximum daily load (TMDL) cleanup plan:** A description of the type, amount, and sources of water pollution in a water body with strategies to control pollution.

**Waters of the state:** Those waters that are defined as “waters of the United States” in 40 CFR Subpart 122.2 within the geographic boundaries of Washington State and “waters of the state” as defined in Chapter 90.48 RCW which include lakes, rivers, ponds, streams, inland waters, underground waters, salt waters, and all other surface waters and water courses within the jurisdiction of the state of Washington.

**Wetlands:** Those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas. This includes wetlands created, restored, or enhanced as part of a mitigation procedure. This does not include constructed wetlands or the following surface waters of the state intentionally constructed from sites that are not wetlands: irrigation and drainage ditches, grass-lined swales, canals, agricultural detention facilities, farm ponds, and landscape amenities.

## Appendix C – Vehicle Waste Material Management

Note: The *You Auto Recycle* manual (Reference 9, pg. 24) and video are useful sources of detailed information on fluid management at vehicle recycler facilities. Call HWTR at 360-407-6745 for copies. More information on waste management can be downloaded at: <http://www.ecarcenter.org>

Wastestream	Recommended Management
Antifreeze	<ul style="list-style-type: none"> <li>• Store separately for resale or recycle.</li> <li>• Clearly label containers (“Waste Antifreeze”, “Useable Antifreeze”, etc.)</li> <li>• If not recyclable, send to a treatment, storage, and disposal facility (TSDF) for proper disposal. See <a href="http://www.ecy.wa.gov/apps/hwtr/hwsd/default.htm">http://www.ecy.wa.gov/apps/hwtr/hwsd/default.htm</a> or Reference 13.</li> </ul>
Batteries	<p>INTACT: Accumulate under cover prior to sale, deliver to recycler, or return to manufacturer.</p> <p>BROKEN: Accumulate acid from broken batteries in resistant containers with secondary containment. Send to TSDF for proper disposal.</p>
Brake fluid	<p>Accumulate in separate, marked, closed container. Do not mix with waste oil. Recycle. Check with waste hauler.</p>
Fuel	<p>Store leaded gasoline, unleaded gasoline, and diesel separately for use or resale. Mixtures of diesel, gasoline, oil, and other fluids may not be recyclable and may require expensive disposal. Do not mix with brake fluid or used antifreeze.</p>
Mercury light switches	<ul style="list-style-type: none"> <li>• Remove mercury light switch assembly from hood and trunk or ABS system.</li> <li>• Place in leak-proof closed container labeled “Used Mercury Switches</li> <li>• Keep container with switches under cover until properly disposed.</li> </ul>
Used oils including crankcase oil, transmission oil, power steering fluid, and differential/rear end oil	<ul style="list-style-type: none"> <li>• Keep used oil in separate containers marked “USED OIL ONLY.” Arrange for pick-up by responsible firm for off-site recycling.</li> <li>• Do NOT mix with brake fluid or used antifreeze.</li> <li>• Do NOT mix with any other waste if you plan to burn it in your shop for heating. Heater must be designed for a capacity of not more than 0.5 million BTU/hr and combustion gases from the heater vented outside.</li> </ul>
Oil filters	<ul style="list-style-type: none"> <li>• Puncture the filter dome and drain it for 24 hours.</li> <li>• Put oil drained from filters into used oil collection container</li> <li>• Keep drained oil filters in a separate container marked “USED OIL FILTERS ONLY.”</li> <li>• Locate a scrap metal dealer or other responsible entity who will pick up your filters and properly recycle/dispose of them.</li> <li>• Dispose of drained oil filters into a dumpster ONLY with the approval of your local landfill operator.</li> </ul>
Paint	<ul style="list-style-type: none"> <li>• Accumulate oil-based and water-based paints separately for use or resale.</li> <li>• If not recyclable, send accumulations to TSDF for disposal.</li> </ul>

Shop towels/oily rags	<ul style="list-style-type: none"> <li>• Use cloth towels which can be laundered and reused.</li> <li>• Accumulate used shop towels in a closed container.</li> <li>• Sign up with an industrial laundry service that can recycle your towels.</li> </ul>
Solvents	<ul style="list-style-type: none"> <li>• Consider using less hazardous solvents or switching to a water spray cabinet parts washer that does not use solvent.</li> <li>• Accumulate solvents separately and recycle. Contact solvent disposal co.</li> <li>• Do not mix with used oil.</li> <li>• Do not evaporate as a means of disposal.</li> </ul>
Windshield washer fluid	Accumulate separately for reuse or resale. If acceptable by the local sewer authority, discharge to sanitary sewer.

# Appendix D – Lists of Recycler and Waste Handling Businesses

*This partial list of vendors is for informational purposes only and not for endorsements by Ecology.*

## **Tire Recycle**

Schuyler Rubber, Inc., Woodinville, 425-488-2255  
Rubber Granulators, Marysville, 360-658-7754

## **Batteries for Recycle**

Allied Batteries (locations throughout Washington): Seattle, 206-762-5522  
Budget Batteries (locations throughout Washington), Tacoma, 206-922-3737  
Eastside Disposal, Bellevue, 206-682-9730  
Interstate Batteries (locations throughout Washington): 1-800-453-0833

## **Drum Recycle (Steel & Plastic)**

Industrial Container Services, Seattle, 206-763-2345  
Al's Seattle Barrel Co., Seattle, 206-622-7218

## **Oil Filter Crushers**

Oberg International: Marysville, 360-658-9521

Northwest Sales Group Inc., Seattle, 206-762-5111

\*For lists of additional recycler and waste handling facilities refer to: "Hazardous Waste Services Directory", Ecology HWTR Program. Call 360-407-6745 for updated lists or download at <http://www.ecy.wa.gov/apps/hwtr/hwsd/default.htm>



## Appendix E - Regional Treatment Centers for Petroleum Contaminated Soils

*For more information on treatment centers contact your Ecology regional office.*

Roosevelt Regional Landfill  
Roosevelt, WA  
800-275-5641

Lafarge Corp.  
5400 Marginal Way S.W.  
Seattle, WA  
206-937-8025

Remtech, Inc.  
8924 West Electric Ave.  
Spokane, WA 99224  
509-624-0210

Anderson PCS Remediation Site  
41 Rocky Top Rd.  
509-965-3621

Woodworth & Co.  
2800 104th St. So.  
Tacoma, WA 98421  
253-383-3585

Fields Shotwell Corp.  
484 Eclipse Parkway  
Eclipse Industrial Park  
Port Angeles, WA 98362  
360-457-1417

Rinker Materials  
6300 Glenwood Ave.  
Everett, WA  
425-355-2111

# Appendix F – Blank SWPPP Worksheets

(Use these forms or create your own.)

<b>Pollution Prevention Team</b>	<b>Worksheet #1</b> <b>Completed by:</b> _____ <b>Title:</b> _____ <b>Date:</b> _____
Responsible Official: _____ Title: _____ Team Leader: _____ Office Phone: _____ Responsibilities: _____ _____ _____	
(1) _____ Title: _____ Office Phone: _____ Responsibilities: _____ _____ _____	
(2) _____ Title: _____ Office Phone: _____ Responsibilities: _____ _____ _____	
(3) _____ Title: _____ Office Phone: _____ Responsibilities: _____ _____ _____	

<b>Material Inventory</b>		Worksheet #2 _____						
		Completed by: _____						
		Title: _____						
		Date: _____						
List materials handled, treated, stored, or disposed of at the site that may potentially be exposed to precipitation or runoff. Also indicate if any spills or leaks of pollutants have occurred during the three years prior to the effective date of the 2004 modified permit. (Including any pollutants no longer handled on site.)								
Material	Purpose-Location	Quantity (Units)			Exposed (three years before effective date of Permit)  (Yes/No)	Likelihood of Contact with Stormwater  If Yes, Describe Reason	Past Spill or Leak	
		Used	Produced	Stored			Yes	No
		(Indicate per/wk. or yr.)						

Description of Exposed Significant Materials				Worksheet #2A _____
				Completed by: _____
				Title: _____
				Date: _____
Based on your material inventory, list significant materials that have been exposed to stormwater during the three years prior to the effective date of the 2004 modified Permit and/or are currently exposed.				
List of Exposed Significant Materials	Period of Exposure	Quantity Exposed (units)	Location (as indicated on the site map)	Method of storage, handling, treatment, or disposal (e.g., sealed drum standing outside, or covered pile, drum, tank)

<b>Potential Pollutant Source Identification</b>		Worksheet #3 _____
		Completed by: _____
		Title: _____
		Date: _____
List all potential stormwater pollutants from materials handled, treated, or stored on site.		
<b>Potential Stormwater Pollutant</b>	<b>Stormwater Pollutant Source</b>	<b>Likelihood of Pollutant Being Present in Your Stormwater Discharge. If Yes, Explain</b>

## List of Significant Spills and Leaks

Worksheet #4

Completed by: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

List all spills and leaks (as indicated on Worksheet #2) of toxic or hazardous pollutants that were significant after the date of three years prior to the effective date of the 2004 modified Permit. Significant spills and leaks include but are not limited to, release of oil or hazardous substances in excess of reportable quantities (see chapter 2 of text). We suggest you list spills and leaks of non-hazardous materials which contaminated stormwater.

Date (month/day/year)	Location (as indicated on site map)	Description				Response Procedure		Preventive Measure Taken
		Type of Material	Quantity	Source, If Known	Reason for Spill/Leak	Amount of Material Recovered	Material No Longer Exposed to Stormwater (Yes/No)	

<b>Identify Other Pollutant Generating Areas</b>		Worksheet #5 _____
		Completed by: _____
		Title: _____
		Date: _____
List areas and activities, not included on Worksheets 2, 2A, and 3, which may also be sources of pollution. Discuss the potential of these areas and activities as potential pollutant sources and identify any pollutant that may be generated by that activity.		
<b>Pollutant Generating Area or Activity</b>	<b>Potential Stormwater Pollutant from Area or Activity</b>	<b>Likelihood of Being Present in Your Stormwater Discharge. If Yes, Describe Reason.</b>

<b>Non-Stormwater Discharge Dry Weather (July, August, September) Assessment and Certification</b>				Worksheet #6 _____ Completed by: _____ Title: _____ Date: _____	
<p>The dry season inspection shall determine the presence of unpermitted non-stormwater discharges such as wash water, non-contact cooling water, or process wastewater (including <i>leachate</i>) to the <i>stormwater drainage system</i>. Such discharges, if illicit, must be eliminated within 30 days, or application submitted to Ecology for an NPDES permit.</p> <p>Tests may include: visual observations of flows, odors, and other abnormal conditions; dye tests; television line surveys; and/or analysis and validation of accurate piping schematics.</p>					
Date	Discharge Location (as indicated on the site map)	Method Used to Test or Evaluate Discharge	Describe Results from Test for Presence of Non-Stormwater Discharge	Identify Potential Significant Sources	Person Who Conducted The Test
<b>CERTIFICATION</b> (Other certification document may be used as required in Section S4 of the Permit)					
<p>I certify under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information. <b><i>Based on my inquiry of the person or persons who manage the systems or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.</i></b></p>					
A. Name and Title (print)				B. Phone:	
C. Signature				D. Date Signed	



<b>Non-Stormwater Discharge Assessment and Failure To Certify Notification</b>		Worksheet #7 _____ Completed by: _____ Title: _____ Date: _____
<p>If you cannot feasibly evaluate the entire stormwater drainage system, fill in the table below with the appropriate information and sign this form to certify the accuracy of the included information.</p> <p>List all outfalls or storm drains tested or evaluated, describe any potential sources of non-stormwater pollution from listed outfalls or drains, and state the reason(s) why certification is not possible. Use the key from your site map to identify each outfall.</p>		
Identify Discharge Location Not Tested/Evaluated	Description of Why Certification is Infeasible	Description of Potential Sources of Non-Stormwater Pollution
<b>CERTIFICATION</b> (Other certification document may be used as required in Section S4 of the Permit)		
<p>I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information. <b><i>Based on my inquiry of the person or persons who manage the systems or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.</i></b></p>		
A. Name and Title (print)		B. Phone:
C. Signature		D. Date Signed

<b>Minimum BMP Identification (Operational, Structural Source Control, etc.)</b>		Worksheet #8 _____
		Completed by: _____
		Title: _____
		Date: _____
Describe the BMPs that are needed for the facility to address existing and potential pollutant sources identified in Worksheets #3, 4, and 5. The description shall include the following minimum operational BMP requirements.		
<b>BMPs</b>	<b>Brief Description of Activities or Improvements</b>	
Good Housekeeping		
Preventive Maintenance		
Spill Prevention and Emergency Cleanup		

BMPs	Brief Description of Activities or Improvements
Inspections	
Structural Source Control BMPs (Cover and Containment)	
Erosion and Sediment Control BMPs (if applicable)	



<b>BMP Implementation Plan</b>		Worksheet #9 _____	
		Completed by: _____	
		Title: _____	
		Date: _____	
Develop a plan for implementing each BMP. Describe the steps necessary to implement the BMP (i.e., any construction or design), the schedule for completing those steps (list dates) and the person(s) responsible for implementation.			
<b>BMPs</b>	<b>Description of Action(s) Required for Implementation</b>	<b>Schedule Milestone and Completion Date(s)</b>	<b>Person Responsible for Action</b>
<b>Good Housekeeping</b>	1. _____	_____	_____
	2. _____	_____	_____
	3. _____	_____	_____
<b>Preventive Maintenance</b>	1. _____	_____	_____
	2. _____	_____	_____
	3. _____	_____	_____
	4. _____	_____	_____
<b>Spill Prevention and Emergency Cleanup</b>	1. _____	_____	_____
	2. _____	_____	_____
	3. _____	_____	_____
<b>Inspections</b>	1. _____	_____	_____
	2. _____	_____	_____
	3. _____	_____	_____

BMPs	Description of Action(s) Required for Implementation	Schedule Milestone and Completion Date(s)	Person Responsible for Action
Source Control BMPs	1.		
	2.		
	3.		
	4.		
	5.		
	6.		
	7.		
	8.		
Erosion and Sediment Control	1.		
	2.		
	3.		
	4.		
Treatment BMPs	1.		
	2.		
	3.		
Emerging Innovative Technologies	1.		
	2.		
Flow Control BMPs	3.		

Employee Training		Worksheet #10 _____	
		Completed by: _____	
		Title: _____	
		Date: _____	
Describe the annual training of employees on the SWPPP, addressing spill response, good housekeeping, and material management practices.			
Training Topics	Brief Description of Training Program/Materials (e.g., film, newsletter course)	Schedule for Training (list dates)	Attendees
1.) FACILITY WORKERS			
Spill Prevention and Response			
Good Housekeeping			
Material Management Practices			
2.) P2 TEAM:			
SWPPP Implementation			
Monitoring Procedures			

<b>Record of Visual Inspections of Stormwater Discharges</b>			<b>Worksheet #11</b>	
			Completed by *: _____	
			Title: _____	
			Date: _____	
* Must be conducted by qualified person identified in the SWPPP.				
List observed pollutants in all discharges and carefully assess the pollutant sources and action steps needed to control the pollutants. Record pollutant sources/generating activities, BMP adequacy, site map, and other facility information on Worksheets 1-9, inclusive.				
Date	Surface Discharge ID	Ground Discharge ID	List of observed pollutants and descriptions of intensities of each.  Include floatables, oil sheen, discoloration, turbidity, odor, etc. observed in the stormwater.	Recommended Action Steps
<b>CERTIFICATION</b> (Other certification document may be used as required in Section S4 of the Permit)				
I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information. <b><i>Based on my inquiry of the person or persons who manage the systems or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.</i></b>				
A. Name and Title (print)			B. Phone:	
C. Signature			D. Date Signed	